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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,485	07/31/2003	Matthew W. Holt	12492.0276	6408

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Steptoe & Johnson LLP  
1330 Connecticut Avenue, N.W.  
Washington, DC 20036

EXAMINER
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LEPISTO, RYAN A

ART UNIT	PAPER NUMBER
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2883

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08/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/633,485

Applicant(s)

HOLT ET AL.

Examiner

Ryan Lepisto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9,11-13,15 and 17-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9,11-13,15,17,18,24,37-39 and 49 is/are allowed.
- 6) ☒ Claim(s) 19,23,25-33 and 40-48 is/are rejected.
- 7) ☒ Claim(s) 20-22 and 34-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 19, 23, 25, 27-33, 35 and 40-48** are rejected under 35 U.S.C. 102(b) as being anticipated by **Nakai et al (US 4,345,816)** (Nakai). Nakai teaches an optical fiber cable (Fig. 1) and seal for protection against a pressure differential between and high (deep sea and therefore several hundred atmosphere pressure (200-900 atm = 3000-12000 psi) and low pressure (sea level ~ 1 atm) environment comprising a plurality of optical fibers (2, column 3 lines 33-34) each having an optical glass (silica is an optical glass) core (column 1 line 14), a first region (sea level) wherein the fiber (2) has a part of a metal (column 1 lines 16-17) coating (L<sub>2</sub>) removed to expose the fiber, a third region (deep sea) wherein the fiber has at least a portion metal coating (right side, column 1 lines 61-62), an epoxy seal (5) bonded to both enclose the second region (left side) and the third regions wherein the fiber connects to electronics (column 1 lines 17-20) and the fiber and epoxy seal disposed in (pass through) a metal (metals are conductive) tube (4) that is further surrounded by a covers sleeve (1) that insulates all of regions from the surrounding environment (column 1 lines 59-64). The product-by-process limitations of the epoxy seal being molded with the second region being placed in a mold for a sufficient time to bond the epoxy to the metal plating and the metal

plating being formed by chemical vapor deposition are only considered in the structure they add to the claim and not the process claimed. The structural limitations considered is the epoxy being bonded to the metal plating of the fibers and the structure of the fibers being metal plated. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garnero, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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**Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakai as applied to claims 19, 23, 25, 27-33, 35 and 40-48 above, and further in view of **Ishiharada et al (US 5,333,227)** (Ishiharada).

Nakai teaches fiber cable described above.

Nakai does not teach expressly that the fiber is coated with chromium, nickel or gold.

Ishiharada teaches an optical fiber (Fig. 4) comprising a gas barrier sheath (7) made of gold (column 6 line 58 – column 7 line 10).

Nakai and Ishiharada are analogous art because they are from similar problem solving area, protecting optical fibers from external environments.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use gold as a metal sheath material as taught by Ishiharada in the fiber taught by Nakai since Nakai specifies any fiber that is reinforced by a plastic or metal coating (column 1 lines 16-17).

The motivation for doing so would have been increase protection of the fiber while not surrendering flexibility by choosing a metal that is a good gas barrier and does not impair the flexibility of the fiber (Ishiharada, column 6 lines 58-61).

***Allowable Subject Matter***

**Claims 9, 11-13, 15, 17-18, 24, 37-39 and 49** are allowed.

**Claims 20-22 and 34-36** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 9 and 49: This claim is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a method of forming a seal on a cable having a core material with the steps of removing an amount of an overlayer on the core to expose a surface of the core, creating a bonding layer by plating the exposed core with a metal forming a metal-plated surface, applying a bonding agent to a portion of the metal-plated surface by placing a region of the cable into a mold and applying epoxy to the region of the cable in the mold for a sufficient time to bond the epoxy to the metal-plated surface, in combination with the rest of the claimed limitations.

With regard to claim 15: This claim is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious an optical fiber cable including a plurality of optical fibers having silica cores, a first region where the fibers have not coating, a second and third regions where the fibers have a coating, metal-plating applied to the first region, an epoxy seal bonded to the metal plating of the fibers in the first region and extending partly onto the first and second regions, a first conductive tube surrounding a portion of the second region, a second conductive tube surrounding a portion of the third region and a conductive

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housing surrounding a portion of the first region including the seal wherein the first and second tubes and the housing form a continuous conductive path.

With regard to claims 20 and 34: This claim would be allowable over the prior art of record if rewritten in independent form including all of the limitations of the base claim and any intervening claims because the latter, either alone or in combination, does not disclose nor render obvious a first conductive tube surrounding a portion of the second region, a second conductive tube surrounding a portion of the third region and a conductive housing surrounding a portion of the first region including the seal wherein the first and second tubes and the housing form a continuous conductive path, in combination with the rest of the claimed limitations.

With regard to claims 11-13, 17-18, 21-22, 24 and 35-39: These claims are allowable over the prior art of record because they depend from claims with allowable subject matter.

### ***Response to Arguments***

Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection. Note, the Nakai reference was already used to reject the same claims in the action dated 8/24/06, but since the claims were again broadened after the last action, this reference again reads on the claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-Th 7:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Art Unit 2883

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